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## Original Communications.

### ABDOMINAL DISEASES AS OBSERVED DURING THE SUMMER OF 1870.

A Paper read before the Dorchester Medical Club,  
October 17th, 1872.

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THAT part of Dorchester known as Neponset and Port-Norfolk, although abounding in what one would naturally regard as material for summer complaint in its various forms, has been unusually free from any prevailing sickness, especially of a severe type, during the summer now past. Bowel complaint of children, although somewhat prevalent, has been of a mild character and mostly manageable with little medication and the usual dietetic care. No case of severe cholera infantum has come under my notice. Most of the cases I have seen have been of non-nursing infants, and such as were in process of dentition.

A few cases of dysentery have occurred, all of a mild character and readily yielding to treatment. A few cases of cholera morbus have been encountered, recovering under the usual care. One case has been met with which, had cholera prevailed among us, would readily have found its classification with that disease. The case was fatal.

On the whole, so far as relates to abdominal diseases of the season, little has been experienced by me worthy of note, and consequently nothing especially new in the way of treatment has been called in requisition. I will proceed with some remarks suggested by hints derived from observation and sources open to every physician in his daily rounds who is careful to see and listen.

With children suffering from disturbed

bowels, my general custom has been to nourish as far as practicable—no matter how young the patient—and to give nutriment in as condensed a form as possible.

I have many times noticed, in the past as in other seasons, among the Irish, little dirty patients with a newly-baked biscuit, a cracker, a cold potato, an apple, a raw turnip, or, as in one instance, a raw cabbage leaf in hand which was being nibbled at will. Remonstrance in these cases seems to be in vain. I never can succeed with this class of patients in establishing any special judicious plan of diet. If the offensive article is removed for the moment, I fancy the noisy protest of the sufferer causes its restoration soon after the doctor's exit. Now among the Irish I have not seen a fatal case of bowel disease the past season; while the single death from the disease was in a family where the most careful nursing was had—the food arranged with the utmost exactness—everything contraband excluded.

It is sometimes not a little difficult to resist popular notions in a sick room; as, for instance, in the matter of allowing a plentiful supply of cold water. We all have seen how common it is to ascribe any paroxysm of pain, any vomiting, or any increased tormina of the bowels to the cold water, should any of these things happen to follow its administration in however small quantity. So also in the indulgence of fruits.

It is my practice, usually, to allow children in their summer sickness, when suffering from thirst, as they are apt to do, a supply of cold water; of course, using discretion as to quantity, state of stomach, &c., making it sometimes, too, the medium of such medicines as are appropriate, but which, in a less diluted form, would be repelled on account of taste. But cold water alone and in full supply has been often attended with the happiest consequences. I will refer to a case I had three or four years ago. This little child, between 2 and

\* This Paper was prepared to be read before the Norfolk District Medical Society in the autumn of 1870, but owing to unavoidable causes was not then read.

3 years of age, had been sick for many days with severe bowel complaint, accompanied with almost constant vomiting. No food, no liquid, so far as tried, would remain in the stomach. A teaspoon of water or any other liquid was as soon vomited as swallowed; and yet the thirst was tormenting. Emaciation was fast going on; the dangers of death seemed imminent. I determined to try the experiment of letting the little patient have her fill of pure cold water. I thought it could not make matters much worse. A large pitcher full was called for, a good sized goblet filled and presented to the child, which was all swallowed with simply stopping once to rest and breathe. Another goblet was filled after a little delay, which was also drunk with great relish, the little patient only stopping once to rest and breathe. Then another was offered, which was seized with less eagerness; and after swallowing about half of it she looked up with what seemed a satisfied and grateful expression, put out her little hand and pushed back the glass as it was again offered to her, lay down in its mother's lap, soon fell into a quiet sleep, followed by gentle warmth and perspiration; had no more vomiting, and was immediately afterward convalescent, requiring little further medical care.

I leave it for others to explain why this little child, whose stomach was in such a state of irritation that it could not retain a single teaspoon of any liquid, not even water, could yet drink, with only an occasional stop to breathe, within the space of five to ten minutes, nearly a pint and a half and yet retain it all. I do not mean that this treatment can always be so successfully and safely pursued in cases of bowel complaint, when vomiting is so persistent and thirst so urgent. But I believe that, by carefully watching children in this disease, and by careful discrimination, we may often hit upon the very article they most need, and, by giving it, do a great deal toward a successful issue. In any case of a similar kind as related, I should repeat the experiment, trusting that, though the gentle stream but increased the flame, the flowing torrent might extinguish it.

In some cases of bowel complaint, I have found cold water, or a weak solution of soda in water, the only substance that the stomach would bear. When this condition obtains in the early stage, while the strength of the child is good, and as yet there is little or no emaciation, I have allowed it thus to be treated—absolutely nothing else being administered for more

than one week, when the stomach has become quiet and capable of retaining and digesting the food.

As illustrating the advantage of patiently watching children with a view to learn their wants, a case may be stated in which I accidentally discovered a longing for sugar. A little had been dropped into the mouth after something unpalatable had been given. I saw that it was sucked down with avidity—an appealing look cast up for more. The difficulty here had been, as so often happens, to keep anything down. I at once had a quantity of loaf sugar cut into small bits, and the child fed with them. As fast as one was dissolved, it was replaced by another. From one to two ounces was thus taken in a day, with great zest, which, with a teaspoon of water occasionally, was all that was used for several days; when tiring of the sweet, it was found that other articles could be tolerated which before had been entirely rejected.

At the risk of being somewhat tedious, I wish to give other instances illustrating that craving for something which the mere sufferer cannot indicate and which it too often, I believe, fails to obtain. A child, after a lingering bowel complaint with teething, seemed far gone, and the stomach rejected everything offered. The case seemed hopeless. I had known raw beef recommended in some forms of bowel complaint. I determined to try it, and it was soon procured, scraped into pulp, salted and given, at first, in small quantity. It was soon apparent that the child had found what it was craving; it was sucked down with all the eagerness it was capable of manifesting, and for nearly two weeks the child took almost nothing else. Convalescence was then so far established, that a successful return was made to the ordinary articles of food.

A very remarkable and, as it proved, a very interesting case was that of a child, about 2 years old, who was brought home to my neighborhood from Alexandria, D. C., where, with its mother, it had been on a visit of several months. It had contracted diarrhoea of a bilious type, and had had, as the mother said, the chills. It had been long sick, and, notwithstanding the unfavorable opinion of its physician, the mother decided on returning with it to her home. On visiting it, I think I found the most emaciated specimen of humanity that I ever saw that was afterward restored to health. With diarrhoea, and vomiting of every kind of nourishment offered, it seemed a case hopeless of relief. Rather as an experi-

ment than with an expectation of success, I directed a trial of brandy, milk, water and sugar, made as strong of brandy as could be swallowed. Much to my gratification, the child manifested a decided relish for it, and did not reject it. It was diligently persevered with, and the longer it was used the more it was craved, and the better enjoyed. Soon, a gain of vigor was perceptible in the child. Suffice it to say, this was substantially the whole nourishment used until it had consumed three gallons of the spirit. At the end of from six to eight weeks, so vigorous had it become, that it was deemed expedient to wean it from its stimulant, and to substitute some other and safer form of nourishment. So strong had the love of brandy become that this was found no slight task. The little fellow, as he began toddling about on his feet, was for a long time earnestly calling for "bandy, bandy." After months, however, he was apparently weaned from it. But whether the seed is sowed thus early, to spring up and develop in after life, into a fatal indulgence, may afford a subject for serious reflection. The child, now 3 years of age, is living in North Carolina, and is, as I am informed, a rugged and healthy boy. It is to be hoped he has not been snatched from death in the days of his innocence, to be a victim of a terrible appetite in his maturer years.

As further illustrating the whimsical cravings of children, I will mention a case just now recovering from a bowel complaint of about five weeks' standing. The child, something over a year old, one month ago, and before being weaned, commenced with a watery discharge from the bowels, and vomiting. The mother, suspecting for a certain reason that her milk was disagreeing with her child, had it taken from the breast. It had been accustomed to being fed from the table at times; weaning, however, seemed not to have the effect of curing it; the disturbance of the bowels continued somewhat aggravated. The stomach remained irritable. It persisted in rejecting all the various liquids we are accustomed to prepare for similar cases, and became much emaciated. Having found nothing that seemed to meet the demands of the stomach, I directed that the child should be carried to the table at the family meals, and to be watched for some indication of its wants. In this way it got access to some mashed potato, which it seemed to relish, and which also was not thrown from the stomach. The next article for which it seemed to show a desire was boil-

ed cabbage, small quantities of which were also eaten with relish. A day or two afterward, I happened to call on the family at one of their meal hours, and I saw my patient eating with great relish, picking it up with its fingers, little bits of meat and potato hash. The child is rapidly convalescing on this kind of diet. I should add that the child had been suffering exceedingly with teething, and that its gums were seasonably scarified.

I trust that my digression from the subject appointed for this paper will be pardoned, for the reason that I stated in the commencement, that the abdominal complaints have not been very prevalent, or of a very severe character, in the community in which I reside, during the past summer.

I thought it might not be remiss to go back to past years for some illustrations of the idea which I would enforce, that it is important to study and watch for the needs and cravings of these sufferers from tedious and often fatal maladies.

The few cases of dysentery which have come under my notice the past season have been of a mild form. I do not propose to say anything of medical treatment in this disease. I will state my experience in the use of one article with which I indulged my patients, and which I also used the preceding summer. It was an indulgence that I found gave them no less surprise than pleasure. I allude to the use of water-melon, which, as is well known, we have had in great perfection and great abundance the past season.

It is never difficult to persuade a patient to take what appetite craves, though he hitherto supposed that the article was entirely prohibited. I have rarely seen patients enjoy anything more thoroughly than they have the melon, and I have seen only the best results from its use. I need not say, to be successful, it should be in a perfect state—neither too ripe, nor insufficiently so. In typhoid fever, I have been in the habit of allowing it for many years, always finding it much relished, a good febrifuge and diuretic, and a valuable means of allaying thirst.

I desire to bear my testimony to the importance and value of one other principle in the management of diseases under consideration. It is to be regarded of paramount importance; namely, quiet of body—*rest*. Highly important in most diseases, it is indispensable in some. I do not fail to enjoin it most strictly in all cases affecting the abdomen. Even in cases not grave in character, a quiet, recumbent posture

greatly facilitates recovery. I dislike to have a dysenteric patient rise from the bed during the course of the disease. Children, in their summer complaints, are equally benefited by a recumbent posture and entire quiet. I know it is not practicable to carry out this management with children always, but much may be done by perseverance and patience in this direction. Tossing babies about in the manner of some nurses and mothers, with the idea of easing their suffering and quieting their cries, must be looked on as an evil and useless habit. Cradles and other rocking machines should be condemned as worse than useless. The quieter children are kept, the less suffering and the less demand for medicine. I feel it should be our constant aim and study to reduce medicine to the minimum, being sure that, in the perfection of practice, we may dispense with the use of drugs to a far greater extent than most physicians are ready to believe at the present day.

I would not have any one present imagine for a moment that I undervalue the ordinary treatment in the summer complaints of children. It is to exceptional cases, cases which are not amenable to the usual remedies, that I have desired to call attention. I wish to urge the importance of finding out by any way we can in these protracted and often intractable cases sometimes met with, what the patient craves; and if we can discover this, let it have a trial. Instinct may prove wiser than reason. In practicable cases it is better to let the child select for itself. The general disgust the child, after weeks of sickness, acquires for almost every article of nourishment afforded in the nursery, makes this desirable. It may reject the very thing it craves, when it sees you trying to force its use. Let it indicate its wants as far as possible, as in a case I above alluded to, and we shall be far more likely to obtain the desired result. Let various articles of food be placed before it; then let the parent observe the pointing of the finger, and the suggestive sound it will attempt to utter, and we can hardly fail to meet its wants. We have already seen that it is of less importance what the article is, as that it meets the craving of the child.

I do not expect this plan will succeed in every instance, but that it will do so occasionally, my own experience and no doubt that of others has abundantly proved.

Every physician, as he travels on in his medical pilgrimage, will occasionally see a case of disease resembling others of its class, but which for some cause wholly, or

to a great degree, fails to yield to the same mode of treatment which generally proves successful. It is well for him to take a note of these individual cases, as he may, after a while, use them as landmarks for future guidance. This remark is especially pertinent to the ailments of children during that period of their lives rife with danger attendant on diseases of the abdominal organs.

## Progress in Medicine.

### REPORT ON SURGERY.

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*Etiology and Treatment of Metastatic Pyæmia.* C. Hueter (*Deutsche Zeitschrift für Chirurgie*, Bd. 1, Heft 1).—In this article, Hueter reviews what he has already written upon the subject, and gives in addition the results of his experience of this disease during the late war. He retains the name pyæmia in spite of Virchow's opposition to it, for, he says, we as surgeons would be in danger of losing sight of the punctum saliens of the disease, namely, pus. Indeed, more numerous and more definite channels have been found for the reception of the cellular constituents of pus into the blood. Pyæmic diseases are divided into two categories, pyæmia simplex, the pyæmic fever caused by the reception of the fluid or cellular constituents of pus, coming from a single source, into the blood (through the lymphatics,) and pyæmia multiplex (metastatic pyæmia) where the fluid or cellular constituents of pus penetrate a thrombus, fragments from which carry them into the circulation. They are carried by the venous circulation to the right side of the heart, thence into the lungs and sometimes beyond into the arterial circulation and into distant organs. The chief cause of pyæmia is considered by surgeons to be bad ventilation and arrangements of hospital wards; but between this and the metastatic abscess seen on the autopsy table lies a chain of clinical events which it is the duty of the student carefully to analyze.

The causes of pyæmia multiplex are divided into indirect, those favoring the formation of thrombi, and direct, or those favoring a softening and septic infection of thrombi. The development of thrombi is favored by a general and a local disturbance of the circulation caused by a diminution



tion of the arterial pressure and a stagnation of the current in the venous system or in single veins; to the former belong old age, bad nourishment, loss of blood, traumatic fever and intercurrent febrile diseases, and to the latter, injuries to the tissues, tight dressings and compression of the veins by inflammatory processes. The softening of thrombi is produced by every form of paraphlebitis, such as the diphtheritic, phlegmonous, lymphangitic, &c.

The causes which render a thrombus capable of producing inflammation so that as an embolus in distant parts it gives rise to metastatic abscesses, are first a chemical infection, arising from decomposing *débris* of muscle or connective tissue, &c., or from the inflammatory poison of non-decomposed pus; and, secondly, an animal infection, from the presence of monads (microsporon septicum. Klebs). [Klebs found that the fluid from wounds which contained the microsporon septicum in large quantities, when carefully filtered so as to free it entirely from these organisms and injected into animals, caused but a slight fever and never metastatic abscesses. If, on the other hand, fluid containing them was injected they died in a few days.] The monads appear in decomposing blood, pus or urine, and preserve themselves by coming in contact with the oxygen in these fluids. They are, hence, called "aërobien" by the Germans. In decomposing fluids containing muscle and connective tissue (i. e. in the decomposing materials of a fresh wound devoid of blood clots or pus), they disappear after the oxygen has been consumed, and are followed by larger organisms called vibriones, which cannot live in oxygen and hence are called "anaërobien."

The monads are as individuals a poison which causes inflammation of the living tissues by its presence. In virtue of their small size and ability to live upon oxygen, they are able to penetrate in great numbers the tissues and give rise to erysipelas, and also to those inflammations of the wound and surrounding connective tissue, to which the name diphtheritic is given. These latter processes, in distinction to erysipelas, soon give rise to suppuration and the formation of foul-smelling pus. Breaking down of thrombi infected with these organisms and with pus is followed by a formation of secondary pyæmic emboli. The thrombi undergo, indeed, a purulent metamorphosis, and in the metastatic deposits it is again the pus which sends substances into the circulation causing fever and death. According to Klebs, a simple

emigration of the monads alone into the circulation is sufficient to produce secondary emboli. It is probable that pyæmic inflammation of joints and of serous membranes is caused by the presence of these organisms in the circulation, or they may be caused simply by the general inflammatory disposition of the tissues of the body under these circumstances. The treatment of pyæmia is, therefore, above all things, a prophylactic one. We must endeavor to prevent the formation and softening of thrombi. We have seen that their formation is produced by the general and local disturbances of the circulation. The former should be prevented by carefully avoiding loss of blood during operations and administering freely alcoholic stimulants in cases of secondary hæmorrhage. Antiseptic dressings should be employed to prevent the formation of fever-producing substances in the wound, and free drainage and avoidance of undue pressure is important for their removal. The diphtheritic inflammations are to be treated with carbolic acid or ferrum candens; erysipelas with inunctions of *pix liquida*, which is supposed to poison the monads found in such numbers in the vessels and lymphatics of the affected part. Local disturbances of circulation are likely to be produced by carelessly performed operations, or by methods involving torn or jagged surfaces of wounds, also by too tight dressings as well as by inflammatory swellings of the surrounding tissues and formation of abscesses. The latter is to be treated by drainage and incisions. If pyæmia occurs, treatment of the fever and removal if possible of the infecting foci.

*Results of Experiments on Pyæmia*, by J. Burdon Sanderson (*British Medical Journal*, May 11. *Half-Yearly Abstract*, July, 1872). In 1867 he injected the purulent liquid contained in the ankle-joint of a patient who had died a few hours before with metastatic abscesses, general suppuration, arthritis, and intense septicæmia, under the skin in a dog and two guinea pigs. The two guinea pigs died within short periods, and exhibited symptoms of great intensity. Both had metastatic abscesses; but in one the lungs were already beset with minute nodules resembling miliary tubercles. The dog lived eleven weeks and had no metastatic abscess, but miliary tubercles of spleen and liver. These and other inoculations showed that two sets of lesions might be produced; as an immediate result, metastatic abscesses, accompanied by a general typhoid state which was often fatal; as an ulterior result, either disseminated nodules which became caseous or interstitial induration, chiefly

in lungs, spleen or liver. These facts led him to believe that the two forms of infective lesions, the pyæmic and tuberculous, were connected together etiotogically and genetically. Bacteria, though not present in the healthy liquids or tissues, or in the products of healthy inflammation, were found in the pyæmic liquids and in the blood of pyæmic patients. Pyæmia originates by the introduction into the living tissues and blood of a poison which is itself a product of inflammations. The poison manifests itself in an alteration of the blood (chiefly the presence of bacteria), and in disorder of vital functions, the most prominent phenomenon being fever. The pus of metastatic abscesses he finds full of bacteria. The presence of bacteria enables us to distinguish infective inflammations from those which are not infective, and their number affords an indication of the degree of infectiveness; and secondly, their presence in the blood is an indication of that constitutional disturbance which accompanies infective inflammation, not only in the intenser forms, but also in the lighter forms of irritative fever. The pyæmic poison we have so far under our control, that beginning with an agent so mild in its action that it produces no marked symptoms, we can convert it into an agent of such intensity that it kills in two or three hours with formidable symptoms. This is effected by a process of *cultivation*. Dr. Klein made the important discovery, that if a pyæmic liquid were transferred to the peritoneum of a guinea pig, and allowed to remain there for a couple of days, although it did not at first produce any intense symptoms in the animal itself, its toxic intensity increased to such a degree that, when the transudation liquid produced in this was injected into another animal, it had acquired a most deadly activity; and that all such extremely active liquids were crowded with bacteria of a particular character, the increased number of which seemed to be in proportion to their toxic properties.

Finally, he states that pyæmia differs from tuberculosis in the rapidity of its progress and the obvious character of the anatomical changes of which it consists. Pyæmia resembles tuberculosis in its mode of origin. Both spring from inflammation.

M. Davaine, at the Academy of Medicine, at Paris, Sept. 17th, ult., in a paper on septicæmia, gave the results of his investigations on the injection of septicæmic blood, i. e., blood derived from an animal poisoned by putrified blood, into rabbits and guinea pigs. He found that the virus acquired increased intensity of power and activity by passing through the animal organism. On its last passage the blood of the rabbit killed by the ten millionth part of a

drop, was injected into five rabbits in doses of the 100 millionth, the billionth, the 10 billionth and trillionth of a drop. All died within 24 hours.

In a second paper read on Oct. 8th, he proposed examining two questions, viz.: Does septicæmia, experimentally produced, invade all animals indiscriminately, or does it exert its special effects on certain species? And what is the condition which imparts an extraordinary virulence to the blood of an animal inoculated with a putrified substance? Rabbits were found more susceptible than guinea pigs. It appears to be a question of species. The experiments showed also that the virus of septicæmia and the ferment of putrefaction were identical. Under identical conditions of temperature they are both produced within the same space of time, and both lose a portion of their virulence if kept too long.—(*Med. Times and Gazette*, Oct. 19, 1872.)

*Billroth on Traumatic Fever* (*British Medical Journal*, July 20, 1872).—This fever is no necessary result of a wound, but is rather to be regarded as an accidental disease. It was held by Schönlein and his school that traumatic fever was a reflex result of the irritation of the nerves of the injured part. Billroth for some time accepted this view, but was led to abandon it by observing that there was no constant relation between the extent of the injury and the intensity of the fever. It was evident, he saw, that there was some intimate relation between the fever and the destruction of tissue; but the course of the fever presented phenomena not at first readily comprehended, namely, remarkable differences of temperature. These variations in temperature, after operations, have been the subject of special investigation by Billroth, in a series of experiments on healthy dogs. As the result of these, he finds that the only two agencies of which an elevation of temperature is a constant result are muscular action and the injection of putrid matters. In proceeding, finally, to explain in what way traumatic fever is produced, Billroth noticed the various theories which have been put forth by Zimmermann, Traube and Senator, Leyden and Liebermeister. He is most inclined to accept the hypothesis that materials are carried into the blood from the sloughing or inflamed part, and act on certain parts of the nervous system in such a way as to disturb the regulation of the temperature. The difference between septic products and those of inflammation is only in degree; there is no essential difference between them. It has been supposed that these products, when introduced

into the blood, give rise to fever (increase of temperature) through an intermediate process of inflammation; but this is rendered improbable by the circumstance that the increase of temperature may take place when there is no trace of inflammation, and that it sometimes follows the injection of water, serum, &c. Again, although embolism by starch or charcoal causes the temperature to be raised, it is rarely attended by inflammation, or, if it be, it is only after some time has elapsed.

The fever-producing materials carried into the blood from sloughy and inflamed parts are not produced by the injury, but are the result of a septic process exercised on the wound. As to the question whether there is an introduction of germs or vibrios, Billroth abstains from giving a decided opinion, although he regards the truth of the germ-theory as probable.

*The mode of Spreading of Inflammatory Processes*, Billroth (*Volkman's Klinischer Vorträge*, No. 4).—Inflammatory processes spread by means of an irritating material, developed at the original seat of inflammation to which the name phlogistic poison has been given. We must hesitate, however, to ascribe the spreading of inflammation alone to this poison, for there are facts which show undeniably the influence of the nerves, as, for instance, in herpes zoster. It is generally supposed that in psoas abscess the pus burrows its way by its own weight, but we find patients who, from the beginning of the disease, have been kept upon their backs, in whom the pus has taken the usual course. Billroth does not think that gravity has anything to do with it.

In what manner does the phlogistic poison spread?

1. The phlogogonous fluid infiltrates the loose cellular tissue by filling its meshes and perhaps, also, its fibres to the extent of their power of swelling.

2. The poison enters the lymphatics and is carried to the skin, causing erysipelas, or through the larger lymphatics of the cellular tissue to the nearest glands, causing lympho-adenitis or lymphangitis, or, finally, it penetrates the veins causing periphlebitis and thrombosis.

3. Both modes of spreading are influenced by the intra or extra vascular pressure.

In the subcutaneous cellular tissue the poison spreads by infiltration, as we have no lymphatic capillaries here. If it penetrates the larger lymphatics it causes a lymphangitis. The poison is carried from here centripetally to the glands, but not

easily centrifugally to the skin. In inflammations of the subcutaneous cellular tissue we are likely to have a lymphangitis, but rarely an erysipelas. That in erysipelas the poison penetrates the lymphatic capillaries is shown by the peculiar coloring of the skin in patches and stripes as it spreads, and by its sharp outline.

In lymphangitis there is an hyperæmia of the perilymphatic cellular tissue caused by a passage of the poison through the thin walls of the lymphatic vessels. The peripheral part of the lymph stream affords the poison for this purpose, while the central part is carried to the blood, causing fever. In periphlebitis the process is similar. The infiltration of pus or serum into loose connective tissue obeys the laws of diffusion, and spreads in those directions which offer the least resistance. Fasciæ, bones and muscles offer the greatest resistance, as, also, dense cellular tissue. Capillary attraction, diffusion and filtration are of far greater importance in the spreading of inflammatory poison than the much over estimated action of gravity.

The enormous hyperæmia of the synovial membranes in joints, sheaths of tendons and subcutaneous bursæ, leads, at times, to exudation into their cavities, causing distention, yet in many cases the product of inflammation, the poison, is carried by fluxion alone into the lymph channels, penetrates the membranes of the joints and causes periarticular inflammation. Volkman was the first to notice the fact that periarticular abscesses in tumor albus of the joints did not communicate with the interior of the joint. It has been supposed that in inflammation of the joints the primary seat of the inflammation was within the cavity, and the pus found its way into the subcutaneous cellular tissue in consequence of a perforation of the capsule. The possibility of this cannot be denied, yet in the majority of cases this does not take place. The cold abscesses are formed in the connective tissue about the joint, and eventually penetrate the joint through some thin portion of the capsule by ulceration causing acute inflammation and fever. The acute periarticular abscesses, on the other hand, very rarely penetrate the joint, for the lymph stream leads out of the joint and not into it. The phlogistic infection of the periarticular connective tissue, occurs in tumor albus, by the passage of the poison from the interior through the intact capsule. In acute inflammations of joints, particularly the rheumatic, the inflammation of the periarticular tissues is caused

in the same way. The quantity of fluid in the joint may be very small, while the oedema about it may be very extensive. Pain is caused in these cases by the acute swelling of the synovial membrane—while in dropsy of the joint, there is comparatively little pain. The action of the poison on the periarticular tissue, is limited by the density or thickness of the membrane of the joint. In traumatic inflammation of the joint, the surrounding tissues are consequently liable to inflammation, as the membranes have not been previously thickened. On the other hand, when the disease begins with a chronic periostitis and inflammation of the capsule, we are not likely to have periarticular abscesses, as the disease is a secondary one and occurs at a time when the capsule is already much thickened.

Chronic urethritis may give rise to periurethral abscesses without perforation of the urethra. In many cases of stricture the constriction is caused chiefly by the inflamed periurethral cellular tissue, while the mucous membrane may be scarcely altered. It is a well known fact to gynecologists, that ulceration of the uterine mucous membrane may cause a perimetritis, and that inflammation of the ovary may give rise to extensive retroperitoneal suppuration, without formation of pus, either in the uterus or ovary.

The spreading of inflammation ceases simply by exhausting itself, or by meeting with some insurmountable obstacle to its progress. Billroth closes this article with these words, "These processes evidently obey certain laws, which are only to be established by careful observation on which our treatment will be based. In studying the history of medicine, one is convinced that the principles of therapeutics have always been dependent upon physiological and pathological observations, and that practice has always been dependent on so-called theory, as action is dependant on thought."

*Hospital Gangrene.*—Prof. F. König. (Volkmann's *Klinischer Vorträge*, No. 40.) The author describes two principal varieties, the ulcerative form, phagedæna superficialis, and the pulpy form or phagedæna profunda. We often find a combination of the two, the pulpy form affecting the middle of the wound, while on the edges, a true ulceration is seen, and not unfrequently the special form seems to be determined by the peculiarities of the affected tissues. Gangrene of a wound of soft parts, as muscular and loose connective tissue, with juicy or

cedematous granulations, assumes the pulpy form, rather than a wound in dense tissues less rich in water, like tough fascia, periosteum or cicatricial tissues. At other times the character of the epidemic favors the particular form. In a certain number of cases, the wound is covered with a tough gray membrane, covering and protecting the granulations, to which the name diphtheritic may be given.

Loose cellular tissue is the most favorable soil for the spreading of the disease, which is caused by the infecting peculiarities of the gangrenous products, which have the same infecting power as the superficial debris of the ulcer.

Internal organs are rarely affected, and the nerves and vessels possess great powers of resistance to the disease. A vessel once opened or a portion of it once having sloughed, it can neither retract, nor can a durable clot form in it. The vessel is generally very friable for some distance beyond the gangrenous point.

Fever does not precede the appearance of gangrene, but is due to the absorption of septic material formed by the disease. It may be continued or hectic.

Hospital gangrene can develop not only in a hospital, but also outside of it; it is seen frequently under circumstances that form epidemics, often appears at the same time with them, and has many points of resemblance to them. On the other hand its development is due to a specific poison, different from that which produces epidemics, and from that which causes simple septic inflammatory processes. The infection is a local one, and can only take place through a wound. That the disease is highly contagious, has been proved by experiments in animals as well as by clinical observation.

Hospital gangrene and diphtheria have been considered by many as identical. (By diphtheria, the author means the epidemic contagious angina, while the terms diphtheritis and diphtheritic, refer to conditions of the mucous membrane or of wounds, in which the surface is covered with a membrane penetrating the tissue and leading to its necrosis.)

The terms diphtheritis and diphtheritic should not be used loosely for hospital gangrene, but should only be employed when there is a well marked membranous formation. As to the identity of diphtheria and gangrene—we find frequently wounds infected by diphtheria, but they always have a very strongly marked diphtheritic aspect—moreover we rarely see diphtheria produced

by an epidemic of hospital gangrene. In diphtheria a series of symptoms remain after the disappearance of the disease, cachexy, paralysis, &c., which we do not see after gangrene. Clinical facts do not prove the identity of the two processes. In regard to the origin of these two diseases, the experiment of Oertel, with which those of the author agree, show that diphtheria is probably of a parasitic origin. The enormous development of parasitic organisms is in such exact proportion to the clinical features and pathological changes, that it is almost impossible not to assume that there is some relation of this kind between the parasite and the disease. The parasitic origin of hospital gangrene has for a long time had its adherents, but neither have the objective examinations of the tissues been carried out to a satisfactory extent nor have the same experiments on the infectious nature of gangrene been made as in diphtheria. Vibrios and bacteria have been found in the broken down tissues, and Hueter has shown the presence of bacteria in the tissues, the blood, and the excreta, but this proves nothing, as they are found also in erysipelas and phlegmonous inflammations. It may be that their presence causes the development of certain chemical poisons, but satisfactory researches are wanting to prove this, which, however, to the author seems quite probable.

The treatment consists in isolation and the employment of caustics; nitric acid and strong solution of chloride of zinc are preferred. In order that the application may take effect, it is important to remove the sloughs thoroughly with scissors; and in order to destroy the subcutaneous and intermuscular connective tissue, which has become affected with the disease, it is necessary to lay them open thoroughly by free incisions, before applying the cautery. Chloride of zinc possesses the advantage that it does not destroy tissues covered with epithelium. It may be applied on charpie, which is stuffed into all parts of the wound. The slough separates in from three to ten days.

*The Surgical Treatment of Fever in Gun-shot Wounds.* Heuter (*Sammlung Klinische Vorträge*, No. 22, Volkmann).—Septicæmia is caused by a decomposition of the secretions of a fresh wound. This is favored by the necrosed tissues which are deprived of their blood supply and hence of their oxygen. The true origin of the process we must seek for, however, in the germs of the vibrio. According to Pasteur, the air contains such germs nearly everywhere, and they find their way readily into wounds.

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If they find here moist albuminous tissues, which are not impregnated with oxygen, they multiply rapidly to millions and noiselessly perform their work. They separate complicated organic combinations, as, for instance, albumen into simpler, and finally into the simplest combinations, into ammonia, carbonic acid and water. This decomposition does not occur immediately, for between the complicated and simplest combinations there exist a series of combinations whose chemical characters it is difficult to determine. Some of these have a special surgical interest, as they excite inflammation in those tissues with which they come in contact, and cause fever when they find their way into the circulation. We call these phlogogonous and pyrogenous septic substances. Some of these substances, which act upon the body like a poison and may be classified under the head of putrid poisons, have been isolated, and to the first and most important of them discovered by Bergmann the name sepsin was given by him. Bergmann discovered that sepsin had the same toxic action upon animals as the combined putrid fluids from which he extracted sepsin. This early traumatic fever is, therefore, a septicæmic fever. At a later stage, these putrid substances decompose the tissues with which they come in contact and cause inflammation and suppuration, and in the pus, which, likewise, can become decomposed, arises a new focus for the development of inflammatory and fever-exciting substances. The fever increases, and in a few days the wound fever loses the character of a simple septicæmic fever and becomes, with the appearance of suppuration, a septicopyæmic, and, finally, with the disappearance of the putrefactive process and the continuance of suppuration, simple pyæmic fever (pyæmia simplex or suppurative fever). The wound now filled with granulations blocks up the lymph channels and prevents the penetration of phlogogonous and pyrogenous substances. The secondary fevers (*wundnach fiebern*) following this stage are produced by the decomposition of normal pus, which, containing quantities of free oxygen, permits the development of the monas crepusculum, while the vibrio disappears. The monas may, possibly, give rise by its presence to the formation of septic poisons, but it is itself a poison, and causes erysipelas and diphtheritic inflammation of the wound (including hospital gangrene) and diphtheritic phlegmonous inflammation of the connective tissue. The most interesting part of his treatment, which is given in detail, is the antipyretic transfusion of healthy blood in cases of



septicæmia and pyæmia simplex or multiplex. The object is to moderate the deadly power of the blood poison. In a case of acute septicæmia, while the patient was moribund, the transfusion of a pound of healthy blood completely revived him. This was followed by a second transfusion, which preserved his life for three weeks, when he succumbed to a severe secondary hæmorrhage. In the case of a severe wound to the joint, with dangerous fever symptoms, we might first treat the fever with transfusion, enabling the patient to undergo an operation, and then treat the source of the fever by a resection. Prof. Albanese, in Palermo, has had success with transfusion employed in this way. Perhaps some day we shall discover a chemical combination which we can send into the circulation to destroy the poisonous action of sepsin.

[To be continued.]

## Reports of Medical Societies.

BOSTON SOCIETY OF MEDICAL SCIENCES.  
EDWARD WIGGLESWORTH, JR., M.D., SECRETARY.

SEPT. 24th, 1872. The Society met at the house of Dr. Dwight, Dr. Ellis in the chair.

*Sibron's Surface Thermometer.*—Dr. Amory exhibited two thermometers. In one, a broad surface of application was obtained by means of a coil of glass imbedded in mastic. In the other, the same advantage was acquired by means of a metallic chamber covered with india rubber. A broken column of mercury served as an indicator. Five to six minutes were usually required to ascertain the exact temperature.

Dr. Ellis spoke of the advantage derived through avoiding, by means of rubber, all actual contact, saying that, in the thermometers in general use, the mere pressure was sufficient to raise the mercury several degrees.

Dr. Dwight considered it advisable to compare always the temperature of the two sides of the body, as that of the right side was usually higher than that of the left.

Dr. Amory concurred with Dr. Dwight as to disease in general, but added that, in neuralgia, the temperature was higher on the side affected.

*Sections of the Spinal Cord. Isolated Nerve-Cells.*—Dr. Dwight then introduced to the Society Dr. Robert McDonnell, of Dublin, who exhibited some clarified sections of the spinal cord prepared by Dr. Lockhart Clarke, of London. A longitudinal section of the spinal cord of an ox showed the gray matter more deeply

stained than usual, and displayed most beautifully both the nerve-cells and the anterior horn of gray matter.

Dr. McDonnell remarked that his own attention had been more especially devoted to the distinct elements, and he next showed some remarkably fine specimens of isolated nerve-cells.

In reply to Dr. Ellis, Dr. McDonnell stated that his method of preparing these specimens consisted in placing a piece of the cord in chromic acid and allowing it to remain some time. He then made his cuts with a razor. Next he used his solution for staining. Then he washed the specimen with alcohol, and, placing it upon a slide, allowed a drop of spirits of turpentine to run down the slide and under the specimen, so as to float it, tapping meanwhile with his finger upon the glass. In eight to ten minutes the specimen becomes beautifully clear. Finally, Canada balsam may be used. For purposes of coarse anatomy a pocket lens is now sufficient. Dr. McDonnell next spoke of the advantages of a weak potassa or ammonia solution for isolating the groups of cells from surrounding caudæ. One process, terminating in the axis cylinder of a nerve, is said to be larger than the others. Dr. McDonnell had not been able to prove this to his own satisfaction. One drop of the alkali to a half ounce of water is enough. More softens the cord and causes it to break up.

In reply to Dr. Jeffries, Dr. McDonnell said that the shrinkage from the use of chromic acid was slight. Glycerine and a drop of carbolic acid being placed on the cells, and these separated with a needle, the mechanical pressure exercised in pricking them apart is so great that the shrinkage from chromic acid cannot be determined.

*Comparative Rate of Growth in the two Sexes.*—Dr. Bowditch exhibited a diagram showing the rate of growth in height in the two sexes. The curves of growth were so drawn that the abscissæ gave the age in years and the ordinates the height in feet and inches. They represented the average measurements on thirteen individuals of the female, and twelve of the male sex. The measurements were all taken annually during the last twenty-five years, and the individuals were all nearly related to each other. An examination of the curves shows the following facts:—

1. Growth is most rapid during the earliest years of life.
2. During the first twelve years boys are from one to two inches taller than girls of the same age.
3. At about twelve and a half years of age girls begin to grow faster than boys, and during the fourteenth year are about one inch taller than boys of the same age.

4. At fourteen and a half years of age boys again become the taller, girls having at this period very nearly completed their growth, while boys continue to grow rapidly till nineteen years of age.

The tables and curves of growth given by Quetelet\* show that in Belgium girls are at no period of their lives taller than boys of the same age, though at twelve years of age their weight is precisely the same as that of boys, and decidedly less both before and after that period. Measurements taken among the lower classes in Manchester and Stockport,† show that during the thirteenth and fourteenth years girls are superior to boys of the same age both in height and weight.

It would be interesting to determine by more extended observations, in what races and under what climatic conditions the growth of girls at about the period of puberty is the most rapid. It is possible that in this way facts may be discovered bearing upon the alleged inferiority in physique of American women.

Dr. Nichols remarked, in this connection, that five-sixths of his own height was due to growth during the summer months, he having been measured every April and September, from the age of six months to that of twenty-one years.

In reply to Dr. James, Dr. Bowditch said that growth went on, though slowly, to nearly twenty-five years of age.

## Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 19, 1872.

### THE MARINE HOSPITAL SERVICE.

OUR readers will recall the fact that an important branch of the public service,—that which governs the marine hospitals in our principal seaports,—is now under the control of the Department of the Interior, and that Dr. John M. Woodworth, of Washington, is the Supervising Surgeon. We hope soon to receive the annual report of this service, which is now in the hands of the printer. In this Dr. Woodworth gives a succinct history of the service, from its organization in 1787 to this time. From its organization it has had a somewhat anomalous position, and its separate existence has been continued with difficulty ;

during the past four years it has fallen into a state of inefficiency and abuse. The office of supervising surgeon was created by Act of Congress, passed June, 1870, and Dr. Woodworth is the first incumbent. He has given, as his report shows, his full devotion and enthusiasm to the work.

There are now thirty-two marine hospitals belonging to the government. The first was established at Norfolk in 1800 ; Charleston and Boston were next made hospital sites ; and they have been built successively at ports on the Atlantic and Pacific shores and the lakes, as circumstances have required.

During the present year 405,814 days of medical relief have been given within the hospitals, exclusive of that afforded outside, while the facilities for furnishing relief have been greatly increased. The expenditures have been decreased to the amount of \$56,000. The amount of the tax collected is \$35,000 greater than in any previous year. The men of the merchant marine, foreign and coasting, including fishermen, boatmen, canal men, &c., are the ones benefited. Forty cents per month is collected from the wages of seamen when employed.

Dr. Woodworth recommends that the seamen belonging to our revenue cutters, coast survey and army engineers corps vessels, as well as those employed by the lighthouse board, be brought within its benefits. The nature of their duties and the localities and circumstances in which they are performed are such that an enlargement of the benefits is a matter of justice. He also recommends that the law be amended so that the actual cost incurred for the treatment of foreign seamen be paid, instead of as now required, limiting the amount to seventy-five cents per day. New hospital buildings are recommended at New York and San Francisco. The sale of the Pittsburgh property and the erection of new buildings is also urged. Dr. Woodworth urges that the hospitals be constructed of wood, as light and cheap as may be, and their destruction after ten or fifteen years, both as a sanitary and economical policy. The prime object of having hospitals at all

\* Sur l'homme et le développement de ses facultés. Paris, 1835.

† Op. cit. Vol. II, p. 19.

is to secure favorable treatment and results in diseases and injuries, and not, as has been too often the case, mere architectural effect or the favoring of localities. The report contains elaborate tables giving amounts expended each year, the number and diseases treated, also data relative to surgical operations performed during the last year in these hospitals.

#### WEDL'S PATHOLOGY OF THE TEETH.

PROF. WEDL's work on the Pathology of the Teeth, according to the Dental Cosmos, contains so much that is new as the result of German investigation, that it surpasses the comprehension of most of our American students, and proves unsatisfactory to all except the most advanced among practitioners—and in many respects to them also. The view thus advanced is strikingly in accordance with that expressed to ourselves by a Philadelphia gentleman some months since in respect to the same work. We cannot fail to express our regret that such an opinion should be entertained by so discriminating a professional organ as the Dental Cosmos; we feel sure that the statement is disproved in our own neighborhood at least, where dental students have long waited for just such a thorough scientific work as that which Prof. Wedl has offered; where the study of general human pathology has kept pace during the past few years with the most advanced investigations of foreign savans; and where instructors in the dental as well as the medical schools are *determined* that the best, the most thorough and scientific training shall be afforded their students, as well as that which is more apparently practical and useful.

If the sole object of dental education is to teach men how to extract and fill teeth, then such a volume as the one in question is indeed out of place; but we are glad to recognize the fact that dentistry of the present day has risen above the plane which makes it simply an art, and that it has become a science. It must keep pace with medicine, recognizing the facts in pathology which are now universally and unreservedly accepted, or it will cease to maintain the respect we have learned to

entertain for it. We cannot help feeling that such views are behind the day, that they are unwarranted in fact, and unworthy to be advanced by dental educators.

#### A REPLY.

A CORRESPONDENT of the British Medical Journal expresses his inclination to emigrate to the United States or Canada, with a view to earning a living or laying up something for a rainy day. He also asks for a suitable place where a medical man may locate—"one that could put up with a little rough life for the chance of earning his daily bread, and having a little to spare."

We fear we might be considered an interested party, were we to say that every city and town throughout our land is already supplied with native talent, and nearly every village and hamlet has its Bob Sawyer, thirsting for chances to amputate, to deliver, to catheterize, to kill or cure, on the slightest hint of opportunity. The *cacoethes operandi et medendi* was aptly illustrated by a well-known surgeon in our own city, who on reaching the spot found *five doctors* in busy attendance on a wounded man in an accident which he had himself witnessed at barely a block's distance.

But, soberly speaking, we recur to a former editorial of our own, where we reminded our English brother that *numerically* we are already well supplied with medical men; but that in many a town and village we fail to find the true scientific attainments which make a man a *good* physician. Here, as in other lands, men have entered the medical profession who are unfitted by moral, intellectual or scientific qualifications to fill the role which the high standard of the day demands. In this country a man is seldom asked whence he came, or what are his antecedents, but *what can he do?* The spirit of republicanism abjures castes and cliques; and our patent of nobility consists in the ability which each one possesses to perform the duties of his position. There is scientific work to be done, and honest scientific men alone can do it. If the correspondent of the British Medical Journal has the true grit, let him come over and try his chances. The places are open; let him take them, *if he can*.

## OUR BRETHREN IN THE COUNTRY.

THE fact that physicians in the country so seldom contribute to the medical literature of the day is, we believe, to be regretted. A certain dread of writing deters many a man from putting pen to paper who has good solid thought in his brain, who studies nature more profoundly than we do in the city, and communes with her more intimately. In his long rides about the country from one sick bed to another, he has abundant time to think over each case critically, and to lay out the probable course of the disease and the care which will be demanded for it. Far away from his brethren at times, remote from drug and instrument shops, he is forced to rely on his own inventive powers. A double inclined plane may be as well made from clapboards as purchased from an instrument maker; and a pocket knife serves to eviscerate and deliver a fetus, provided it is only in the hands of a man who knows what he is about and has the energy to do his duty.

Our own views regarding the course which such men owe themselves and us are embodied in a few lines which we clip from a report of a branch of the British Medical Association, sent us by Dr. Styrup, the Honorary Secretary. It is as true for England as for America. The committee "are of opinion that if each thoughtful practitioner (especially their rural brethren, who are necessarily thrown so much more upon their own individual resources than are practitioners in populous towns) were to jot down, as briefly as may be, any successful deviation from the ordinary treatment of disease which may occur in his practice, and favor us with the result at the Annual Meetings, we should ere long be furnished with a mass of valuable practical hints, which, at present, are simply stored up in the brain of the busy practitioner; and, on his decease, too often lost to suffering humanity."

We had already put our manuscript in the hands of the compositor, when we received a letter from a valued subscriber on the very topic to which we have alluded. We let some of his sentences speak for themselves.

"I have felt that if I sent you some of my own thoughts, probably a want of taste and scholarship would become apparent in my communications. With a large country practice a man has to be driving about, facing the

storms and contending with the elements; while, with an equally large city practice, he would have time to read up in his profession. Hence rural practitioners, as a rule, are not prepared to report their experience in so scholarly a style as our urban brethren. \* \* \* We frequently have not at hand the appliances for doing our work in the highest style of the art, and are obliged to improvise means to accomplish certain ends, which to you would seem rather ludicrous. We, in our isolated situations, are obliged sometimes to assume very grave responsibilities single-handed and alone. \* \* \* I think if our cosmopolitan brethren, to whom we are wont to look as authority, would criticize us kindly, and accompany criticism with practical suggestions, we might improve ourselves and obtain useful information by reporting even our blunders."

We thank our brother for these very sentences; they serve as confirmation of our own words previously written, and we have already given the answer. If any one of our brethren in the country has *good and valuable* thoughts in his head, let them not be lost among the mountains and valleys which witness their birth. It is every man's *duty* to pay back something for that he has received; and if we of the city cannot recut the stone, or give it a finer setting, let it go—the rough diamond as it is—in spite of its homely exterior.

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## The Hospitals.

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## MASSACHUSETTS GENERAL HOSPITAL.

*Case of Paralysis of Wrist and Fingers.*  
—[Service of Dr. Minor.]

On October 19th, an expressman entered the hospital with paralysis of the left wrist and hand. He had previously enjoyed good health, though suffering from the scrofulous diathesis which was inherited from his mother. He had always had good lodgings and good food, but had been much exposed to cold and bad weather. At one time after a long drive, he found himself the next morning unable to raise the left wrist. There was no history or evidence of lead poisoning. The bowels were regular. After about a week, as there seemed no tendency towards recovery, he was put upon the tinct. mur. iron, and electricity was daily used. He also took alkaline baths

twice a week. At the time of admission there was a troublesome eczema of the legs.

After about two weeks' continuous use of electricity, an improvement began to be evident. After three weeks' time the hand could be used perfectly well. The eczema also improved, and he was discharged as cured.

#### BOSTON CITY HOSPITAL.

##### *Case of Fractured Skull.*—[Service of Dr. G. W. GAY.]

Ann C., *et. 50*, admitted Oct. 22d, 1872. Patient was brought to the hospital about 2 o'clock in the morning, said to have been assaulted by her husband with a hatchet. On entrance, examination revealed several wounds—one about two and a half inches long in the left parietal region; another one inch long over the eye of the same side, cleanly cut and not extending to the bone; another, one inch long, in the frontal region; and still another, about two inches long, just above the occipital protuberance, extending to the bone, which could be felt denuded. On the right side, posterior to the frontal eminence, was a lacerated wound about one inch in length. There were severe contusions upon the chin and left mastoid process. The wound above the left ear extended through the bone, and a probe passed in delicately was raised by each pulsation of the brain. A small amount of what appeared to be brain substance was noticed upon the hair covering the wound. Pulse 100. The patient did not appear perfectly rational, although at times her mind seemed quite clear. The wounds were closed by sutures, except the one communicating with the brain, and cold water dressings applied.

Oct. 23d.—Pulse 120. Patient quite rational; no paralysis. The brain substance filled the wound and protruded a little. She had ice water applied to the head, and a diet of milk and beef-tea.

Oct. 24th, evening.—Pulse 104. Skin natural. She seemed to be perfectly rational. All the wounds had united by first intention, except that through which the brain protruded, and that was in good condition.

From this date, the patient continued to improve, and on the 20th of Nov. was able to walk about the ward.

##### *Case of Fracture of the Pelvis.*—[Service of Dr. G. W. GAY.]

James R., *et. 23*, carpenter, was admitted Nov. 1st, 1872. About three and a half

hours before, patient was attempting to cross a railroad track, when he was struck by a passing train and severely injured. On examination, it was found that he had a fracture of the left ilium, extending through the thin portion of the bone. There was an opening about two inches in length at the outer side of the anterior superior spinous process of the ilium, and on introducing the finger, great laceration of the tissues and splintering of the bone were found to exist. There had been some hæmorrhage, and he was in a state of slight collapse. Pulse 100, and feeble. A compress and firm bandage were applied. A catheter was passed and the urine found to be quite bloody. At the first entrance of the catheter clear blood escaped, but afterward the urine became more clear.

Nov. 2d.—He had kept down but little nourishment since entrance. Pulse 104, feeble. Urine scanty.

Patient being etherized, the wound was enlarged in a line parallel to the crest of the ilium, and several large splinters of bone removed. The fracture was found to extend upward toward the crest of ilium, and anteriorly to about midway between the anterior superior and inferior spinous processes. The pubic bones were somewhat loosened, but not fractured. Evening.—Pulse 152; skin hot; patient very thirsty.

Nov. 3d.—Slept a little last night by aid of anodynes. Skin hot. Pulse 152.

Evening.—Abdomen tympanitic. Pulse 152. Patient was very restless, and vomited a good deal. He died at 10, A.M., on the following day.

##### *Case of Fracture of the Spine.*—[Service of Dr. G. W. GAY.]

Patrick S., *et. 24*, teamster, was admitted Oct. 21st. While under the influence of liquor, he was run over by a team, the wheel passing over his neck. On entrance, he complained of pain in his neck and seemed to be very drunk. Pupils normal. Some abrasions about face and head, but nothing presenting a very serious aspect. Pulse 100. He was put in bed, and ammoniac carb., *gr. v.*, was ordered to be given every hour for three hours. Three hours later, he gave his name, answered questions rationally, &c. The lower extremities were paralyzed; respiration mostly abdominal. The arms were also paralyzed; he could raise his hand to his head, but could not grasp with, or move, fingers. The urine had to be drawn off by catheter.

Oct. 22d.—Slept some during the night. Had priapism. Complained of great thirst. Tongue coated brown in the centre.



Evening.—Temperature in axilla 104°. Pulse 104. Respiration 32. Was in great pain, and made so much noise that he was kept in a separate room.

Oct. 23d.—Condition worse. The conjunctivæ were considerably reddened. He did not sleep much during the night, although large doses of morphia were given. Pulse frequent and full. He died in the evening.

After death, distinct crepitus was detected in the neck; the fracture was probably between the 6th and 7th cervical vertebrae. No autopsy was allowed.

*Case of Gun-shot Wound.*—[Service of Dr. FIFEFIELD.]

C. N., æt. 30, painter, admitted Oct. 1st. The previous night, he was shot by the carelessness of a comrade, the ball striking the right hypochondrium about three inches to the right of the median line. A probe passed only through the integument and adipose tissue. When admitted, he was in a state of shock. Pulse 100, and feeble. Suffered from pain in the right shoulder.

At 9 P.M., the temperature was 99.5°. Pulse 80, and irregular. Some pain was felt within a radius of six inches around the wound. He was obliged to crook the body forward continually, on account of the pain in attempting to stand erect. On passing the catheter, the urine was found to be quite bloody.

2d.—No pain in shoulder. Said he felt very well. No abdominal tenderness. Pulse intermittent.

3d.—Condition good. Complained of nothing.

5th.—Only has pain in attempting to maintain an erect position. Micturates freely, and urine is free from blood.

8th.—Discharged relieved.

*Case of Rupture of Urethra, with Extravasation of Urine.*—[Service of Dr. G. W. GAY.]

James L., æt. 36, admitted Nov. 24th. The patient was an inmate of the Suffolk jail when he was first seen by Dr. Gay, Saturday evening, Nov. 23d. He had complained of trouble that morning for the first time. On examination by the attending surgeon at the jail, there was found to be extravasation of urine into the scrotum. Two or three incisions were made at the most prominent points, and a large poultice applied. At night, he was much more comfortable, and the urine oozed freely through the incisions, as well as from the meatus. As there were no conveniences for treatment at the jail, he was removed to the hospital.

Nov. 25th.—The scrotum was greatly swollen, from penis to anus, hard and brawny, and had begun to slough in the median line. Free incisions were made into the scrotum, and several ounces of pus and urine escaped.

As phimosis existed, the prepuce was slit up for one-half inch on its upper surface. At the meatus, there was a slight stricture, hardly admitting a small probe. This was ruptured forcibly with a conical bougie, and on passing the instrument farther along the canal, there was found to be a narrowing just before reaching the bulbous portion. This was also dilated, and the bougie entered the bladder without further trouble. On exploring the scrotum with the finger, the excavation was found to extend back to the anus and behind to the urethra, but the opening in the urethra was not found. The penis not being swollen nor œdematous, an elastic catheter was passed into the bladder and fastened. As the catheter entered the bladder, six or eight ounces of urine came through it. The patient was put into bed and a compress applied, wet with solution of chlorinated soda.

Evening.—Pulse slow and full. Stimulants ordered.

The patient recovered.

*Rupture of internal lateral Ligament of Knee.*—Lawrence R., æt. 55, was admitted Oct. 11th. About half an hour before, the patient had been injured by a heavy stone rolling upon him. On entrance, examination showed that a rupture of the internal lateral ligament of the right knee had taken place, with extensive bruising and extravasation of blood about the middle of the outside of the thigh. The limb was placed at rest in a long fracture-box and evaporating lotions applied.

16th.—Abscess threatening in thigh.

18th.—The right thigh was greatly swollen and fluctuation detected easily. Skin red and nearly ready to break. The patient was etherized and an incision of three inches in length was made in the outer side of the thigh at junction of the upper and middle thirds. This gave exit to about ten ounces of pus, and left a large cavity, about 8 inches long by 4 inches wide, outside the muscles.

20th.—Condition improving. Fever subsiding and appetite increasing. Discharge free and healthy.

Nov. 15th.—The limb was removed from the fracture-box and a ham splint and firm bandage applied.

## Medical Miscellany.

CERTAIN medical men in London have caused the prosecution of various quacks in that city, who have falsely represented themselves as medical practitioners. One noted charlatan has already been held for his appearance, under the Medical Act. The profession in London intend these to be test questions, on which to found farther action.

VOLTAIRE's definition of a physician is: "An unfortunate gentleman, expected every day to perform a miracle; namely, to reconcile health with intemperance."

SIR WILLIAM JENNER is to be the new President of the Pathological Society of London.

MR. HARGRAVE has retired from the Professorship of Surgery in the Irish College of Surgeons and the Surgeony in the City of Dublin Hospital.

BOSTON LYING-IN HOSPITAL.—For some years past the Trustees of this Institution have not deemed it advisable to maintain a hospital. The apparently urgent need of such a charity at the present time, however, has induced them to re-establish it. To this end they have secured the house No. 24 McLean Street, and have caused such alterations as may be necessary to be made. It is expected that the hospital will be opened for the reception of patients on the 1st of January, 1873.

The officers of the Institution are:—

President, Charles Hamilton Parker; Vice-President, Francis Boyd; Treasurer, Thornton K. Lothrop; Secretary, F. A. Hall; Trustees, Charles G. Putnam, M.D., Abbot Lawrence, Charles E. Ware, M.D., James Ayer, M.D., Thomas Hollis, Horace Dupee, M.D., William Amory, Samuel K. Lothrop, D.D., Thomas Restieux, Uriel Crocker; Consulting physicians, Francis Minot, M.D., John F. Reynolds, M.D., C. E. Buckingham, M.D.; Visiting Physicians, Henry Tuck, M.D., W. L. Richardson, M.D.

THE plans for the long-talked-of new buildings for the State Lunatic Hospital, which are to be erected on the land near Lake Quinsigamond purchased by the State for that purpose some two years since, are approaching completion. Dr. Eastman, the new superintendent of the hospital, has given the subject much careful consideration, and in consultation with the trustees, and with the superintendents of the best institutions of the same character in the country, has matured a plan which seems to combine all that is essential in this edifice. The building will cover an area of some 1200 by 400 feet and is four stories in height. Four or five hundred patients can be provided for in the different wards. The material of the building will be either brick or stone, and its architectural design contemplates the securing of the best accommodations for the greatest number of patients, with as little as is possible of

costly ornamentation. The plan has been submitted to many men experienced in the care of the insane, and meets with their general approval. If it meets the approval of the governor and council, the details will be worked out as promptly as is possible, and the work of construction will begin in the spring. Two years or more will be required for its completion, by which time the present buildings, already insufficient and ill adapted to the best treatment of patients, will have become overcrowded.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION offers a prize of \$100 for an essay, to be awarded in May, 1873, "On the Pathology and Treatment of Diseases of the Ovaries." The subject of the prize for 1874 is, "At what stages of Pulmonary Tuberculosis is a change of climate desirable; what are the principles which should govern us in choosing the kind of change to be made, and the best localities in North America to send patients of this class?" The prizes are open for competition by medical editors only.

PAMPHLETS RECEIVED.—The Use of the Seton in the Treatment of Chronic Affections of the Womb. By Ely Van de Warker, M.D. New York. 1872. Reprinted from the Journal of Obstetrics.

MARRIED.—In New York, 12th inst., Dr. John C. Jay, Jr., to Miss Harriette A. Vinton.

DIED.—In New Orleans, Dec. 6th, Warren Stone, M.D., aged 65 years.

Deaths in fifteen Cities and Towns of Massachusetts, for the week ending Dec. 7, 1872.

Cities and Towns.	No. of Deaths.	Pitchburg . . . . .	1
Boston . . . . .	147	Taunton . . . . .	5
Charlestown . . . . .	11	Somerville . . . . .	8
Worcester . . . . .	22	Holyoke . . . . .	7
Lowell . . . . .	16		299
Milford . . . . .	4		
Chelsea . . . . .	9		
Cambridge . . . . .	24		
Salem . . . . .	12		
Lawrence . . . . .	10		
Lynn . . . . .	19		
Gloucester . . . . .	4		

### Prevalent Diseases.

Smallpox . . . . .	52
Consumption . . . . .	49
Pneumonia . . . . .	20
Scarlet Fever . . . . .	19
Typhoid Fever . . . . .	18

The deaths from smallpox were as follows:—forty-one in Boston, six in Cambridge, two in Charlestown, one in Lawrence, one in Lynn, and one in Holyoke. Of the deaths from scarlet fever fifteen were in Boston.

GEORGE DERRY, M.D.,

Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, December 14th, 188. Males, 99; females, 89. Accident, 5 aneurism, 1—asphyxia, 1—inflammation of the bowels, 1—bronchitis, 4—inflammation of the brain, 2—congestion of the brain, 1—disease of the brain, 1—cancer, 6—cancer, 1—consumption, 2—convulsions, 5—croup, 2 debility, 3—dropsy, 2—scarlet fever, 18—typhoid fever, 7—gastritis, 2—disease of the heart, 4—intemperance, 3—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 7—inflammation of the lungs, 10—marasmus, 7—measles, 1—old age, 4—paralysis, 1—puerperal disease, 1—pleurisy, 1—peritonitis, 1—pyæmia, 2—scalded, 3—smallpox, 51—suicide, 1—teething, 1—unknown, 3.

Under 5 years of age, 68—between 5 and 20 years, 18—between 20 and 40 years, 54—between 40 and 60 years, 28—above 60 years, 20. Born in the United States, 112—Ireland, 39—other places, 37.